

AMENDMENTS TO THE CLAIMS

1. (currently amended): An amplifying circuit, comprising:

a battery power source;

a regulator, configured to regulate an output of the battery power source and to generate a reference voltage;

a signal ground generating device configured to generate and output a signal ground by ~~changing~~ applying the reference voltage to a resistance changed in accordance with deterioration of the battery power source; and

at least one operational amplifier configured to amplify and output a signal having a prescribed waveform, said operational amplifier using the battery power source as a driving power source, wherein the signal ground is positioned at a center of a vibration amplitude of the waveform.

2. (Original): The amplifying circuit as claimed in claim 1, wherein said signal ground generating device further comprises:

a control section, configured to output a control signal when

the battery power source deteriorates to a prescribed level;
and

a resistance division circuit, configured to divide the
reference voltage at a prescribed rate to obtain a prescribed signal
ground in accordance with the control signal.

3. (Original): The amplifying circuit as claimed in claim 2,
wherein

said control section includes a CPU and a RAM, wherein
said RAM stores data of a prescribed deterioration level of the
battery power source, and said CPU controls the control section to
output the control signal when the battery power source
deteriorates to the prescribed deterioration level.

4. (Currently amended): The amplifying circuit as claimed in
claim 2, wherein said control section includes a plurality of comparators,
each configured to compare a voltage of the ~~batter~~ battery power source
with a unique reference voltage; and wherein said resistance division
circuit includes a plurality of division resistances being serially connected
and having the same number of resistances as a number of the

comparators, each of said plurality of resistances being turned on or off in accordance with a comparison result of the plurality of comparators.

5. (Original): The amplifying circuit as claimed in claim 1, wherein a speaker is driven by the battery power source.

6. (currently amended): A mobile information terminal, comprising:

a battery power source;

a regulator, configured to regulate an output of the battery power source and to generate a reference voltage;

a signal ground generating device configured to generate and output a signal ground by ~~changing~~ applying the reference voltage to a resistance changed in accordance with deterioration of the battery power source;

at least one operational amplifier configured to amplify and output a signal having a prescribed waveform, said operational amplifier using the battery power source as a driving power source, wherein the signal ground is positioned at a center of a vibration amplitude of the waveform; and

a speaker, driven by the battery power source.